15.04 – Building Code

Sections

15.04.010 – International Building Code 2015 – Regulations adopted and modified [1]

The 2015 International Building Code issued by the International Code Council, Inc., 4051 West Flossmoor Road, Country Club Hills, IL, 60478, one (1) full edition of which has been and are on file in the Office of the Clerk of the City of St. Charles, Illinois, for more than thirty (30) days, together with the amendments listed in Section 15.04.015

hereof, are hereby adopted as the regulations governing the construction of buildings and structures within the City of St. Charles, except for one- and two-family dwellings and townhouses not more than three stories in height, which are covered by Section 15.04.020. (For adoption of administrative provisions in Chapter 1 of the International Building Code, see Chapter 15.101).

([2016-M-8](#) [2]; [2010-M-42](#) [3]: § 1; [2004-M-62](#) [4]: § 1)

15.04.015 – International Building Code 2015 - Amendments **[5]**

1. **Townhouse**: A single family dwelling unit constructed in a group of 3, 4, 5, or 6 attached units in which each unit extends from foundation to roof and with open space on at leasttwo(2) sides. Dwelling units where more than six (6) units-are attached shall be governed by code provisions applicable to multiple family dwellings, rather than the provisions of this one(1) and two(2) family dwelling code.

2. Amend Section 410.7" Automatic Sprinkler System" by deleting exceptions # 2.

3. Delete the provision in section 706.3 " Materials" in its entirety and substitute the following therefore:

706.3 Materials: Firewalls shall be constructed of approved masonry materials or other similar approved product or assembly.

4. Delete the provisionsin.Section 903. 2 " Sprinkler Systems—Where Required," inclusive of subsections 903. 2. 1, 903.2.2, 903. 2.3, 903.2.4, 903. 2.6, 903.2. 71 903.2.9,:and'903. 2.10 and substitute the following therefore:

903.2 Where required. Notwithstanding;any language to the contrary, that is contained elsewhere in this code, an approved automatic sprinkler system installed inaccordance with the provisions of all,applicable codes and standards shall be provided and maintained in full operating condition throughout every story and basement of all Use Groups as listed in Section 302. 4 of the International Building.Code.

Exceptions:

1) Structures not considered to be habitable or occupiable of less than:5;000 square feet, with a low fire:or life hazard risk and located not less than 30 feet from-another structure. Buildings of this,type would normally be classified within the Utility and Miscellaneous Group U asAescribed in,Section 372 of the International Building Code, Provided:

a. The-structure is continually monitored byan approved automatic firealarm system.

2) Open Parking Garages

The requirements, contained in these exceptions, shall bersubject to modifications by the authority having jurisdiction to compensate for particular building conditions to meet the intention of the code.

5. Add Section 903.6 as follows:

903.6 Change ofuse classification. Notwithstanding any language to the contrary contained elsewhere in the codes adopted, an automatic sprinkler system shall be provided throughout-a building, when the use classification of the buildingora space within theliuilding changes, provided one of the following conditions exists:

1. if the new or proposed use is more hazardous, based on.life and fire risk, than the existing use. (see table 903. 6)

This requirement shall be subject to modifications by the authority havingjurisdiction to compensate for particular building conditions.

Hazard Category

Table 903.6.3

Relative Hazard	Occupancy Classifications
1 (highest hazard)	H
2	I-2, I-3, I-4
3	A, E, I-1, M, R-1, R-2, R-4
4	B, F-1, R-3, S-1
5 (lowest hazard)	F-2, S-2, U

6. Delete the provisions of Section 907.2" Where required" and substitute the following therefore: **907.2 Where Required**: An approved fire alarm system installed in accordance with the provisions ofthis code and NFPA 72 shall be provided in new buildings and structures in accordance with Sections 907.2.1 through 907.2.23 and provide occupant notification in accordance with 907.5, unlessother requirements are provided by another section of this code. Notwithstanding any provision of Section 907 and its,subsections to the contrary,an approved manual fire alarm signaling system shall betinstalledand,maintained in all buildings over one(1) stoiy in height or over 1, 000 square feet.

7. Delete the provisions ofSection 907.6.6. 1 " Automatic Telephone-Dialing Devices."

8. Amend the provisions of Section 912. 1 " Installation" and substitute the following therefore:

912.1 Installation. The type(Siamese, Storz) and size of the fire department connection shall be in accordance with the NFPA standard applicable to the system design and shall be subject to approval of the FirvDeparlment, based'upon an analysis of the building's size and use group.,Generally, a 5- inch size, Storz type connection with a 30 degree downward is required.

9. Add' subparagraph 6 to Section" 1008.3. 3 Emergency Power for Illuminating" as follows: 6. In all rooms and spaces over 1, 000 square feet in area with an occupancy load of 20 or more and all mechanical rooms.

10. Amend Table 1020. 1 to read, as follows

Table 1020.1

Corridor Fire Resistance Rating

Occupancy	Occupant Load Served by Corridor	Required Fire-Resistance Rating (hours)	
		Without Sprinkler System	With Sprinkler System (c)
H-1, H-2, H-3	All	Not Permitted	1
H-4, H-5	Greater than 30	Not Permitted	1
A, E, F, M, S, U	Greater than 30	Not Permitted	1
R	Greater than 10	Not Permitted	1
I-2 (a), I-4	All	Not Permitted	1
I-1, I-3	All	Not Permitted	1 (b)
B	Greater than 30	Not Permitted	1 (d)

(a) For requirements for occupancies in Group I-2, see Section 407.3.

(b) For a reduction in the fire-resistance rating of occupancies in Group I-3, see Section 408.7.

(c) Buildings equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or 903.3.1.2 where allowed.

(d) Glass permitted in wall.

Il. Delete Section 180TI A' Permanent Wood Foundation Systems" in their entirety.

12. Add Exhibit A:.

Exhibit A

Performance Guidelines for High Hazard Uses in the City of St. Charles

1. Specific location: The geographic location and distances to other structures, rivers, streams, and other use groups.

2. Zoning: The proximate distances to Assembly, Educational, Institutional, and Residential uses and vacant land zoned for these uses.

3. Types of hazardous materials which are not allowed: Materials listed in Section 307.3 High Hazard Group H-1 that present a detonation hazard shall not be permitted under any circumstances.

4.

Allowable construction types: Type I and II only.

5. Required fire protection for High Hazard materials:

a. Provide extra hazard Group II fire sprinkler system

b. Provide a fixed foam fire protection system

6. Required water supply system: 3,000 to 6,000 gallons per minute from a reliable source.

(2016-M-8 [2]: § 1; 2010-M-42 [3]: § 2; 2006-M-63 [6]: § 1; 2004-M-62 [4]: § 1)

15.04.020 – International Residential Code - One Family and two Family Residences - Regulations 2015 - adopted and modified **[7]**

The provisions of the 2015 International Residential Code for One and Two Family Dwellings, published February 2015 by the International Code Council, Inc., 4051 West Flossmoor Road, Country Club Hills, IL 60478 (hereinafter sometimes referred to as "the IRC"), not less than one (1) copy of which have been and are on file in the Office of the Clerk of the City of St. Charles, Illinois for more than thirty (30) days, together with the amendments listed herein, are hereby adopted as the regulations governing the construction of one and two family dwellings and townhouses not more than three stories in height.

Amendments to the 2015 International Residential Code for One and Two Family Dwellings:

Chapter 1 – Administration:

A. **Section R101.2 Scope**: Revise to read as follows:

"R101.2 Scope. The provisions of the International Residential Code for One and Two Family Dwellings shall apply to the construction, alteration, movement, enlargement, replacement, repair, equipment, use and occupancy, location, removal, and demolition of detached one and two family dwellings not more than three stories in height with a separate means of egress and their accessory structures."

B. **Section R105.2 Work exempt from permit:** Delete this section.

C. **Section R105.2.3 Public service agencies**: Delete this section.

D. **Section R105.5 Expiration**: Revise to read as follows:

"R105.5 Expiration. Every permit, except demolition permits, shall become invalid or void unless the work authorized by such permit is commenced within 180 days after its issuance, if the work authorized by such permit is suspended or abandoned for a period of 180 days after the time the work is commenced. Demolition must commence within ten (10) days and completed within thirty (30) days of issuance, otherwise the permit becomes invalid. The Building Official is authorized to grant, in writing, one or more extensions of time, for any permits, for a period not more than 180 days each. The extension shall be requested in writing and justifiable cause demonstrated."

E. **Section R105.7 Placement of permit:** Revise to read as follows:

"R105.7 Placement of permit. The building permit card shall be kept on the site of the work and be visible from the street until such time as a certificate of occupancy permit has been issued, or a final inspection has been performed."

F. **Section R106.1.4 Information for construction in flood hazardous areas**:

Revise to read as follows:

"R106.1.4 Information for construction in flood hazardous areas. For buildings and structures in flood hazard areas, as established on local floodway rate maps, locally adopted flood plain ordinances shall apply."

G. **Section R106.3.1 Approval of construction documents:**

Revise to read as follows

"R106.3.1 Approval of construction documents. When the Building Official issues a permit, theconstruction documents shall be approved in writing or by stamp. One set of the approved construction documents as reviewed shall be retained by the Building Official. The other set shall be returned to the applicant and shall be kept on the site of the project and shall be open to inspection by the Building Official or his or her authorized agent/representative."

H. **Section R106.3.4 Pre-Application conference**: Add a new section to read as follows:

"R106.3.4 Pre-Application conference. All applicants and owners seeking demolition permits for principal buildings on a lot or site shall first be required to attend a pre-application conference with the Building Official and other city staff as directed, for the purpose of discussing the City of St. Charles requirements for demolition and reconstruction."

I. **Section R109.1.3 Flood plain inspection**: Delete this section.

J. **Section R110.1 Use and occupancy**: Delete the exceptions.

K. **Section R110.3 Certificate issued**: Delete lines 3, 5, 7, 8, and 9.

Chapter 2 – Definitions:

A. **Change the stated term MANUFACTURED HOME to MANUFACTURED/MOBILE HOME**.

B. **Delete the stated definition of Townhouse and substitute therefore:**

"TOWNHOUSE. A single family dwelling unit constructed in a group of 3, 4, 5 or 6 attached units in which each

unit extends from foundation to roof and with open space on at least two sides. Dwelling units where more than six units are attached shall be governed by code provisions applicable to multiple family dwellings, rather than the provisions of this one and two family dwelling code."

Chapter 3 – Building Planning:

1. **Table R301.2 (1) Climatic and Geographic Design Criteria:** Revise to read as follows

Ground Snow Load	**Wind Design**				**Seismic Design Category**	**Subject to Damage From**			**Winter Design Temp**	**Ice Barrier Underlayment Required**	**Flood Hazards**	**Air Freezing Index**	**Mean Annual Temp**
	Speed (mph)	Topographic effects	Special wind region	Wind-borne debris zone		Weathering	Frost line depth	Termite					
30	115	No	No	No	B	Severe	42-Inches	Mod to Heavy	-5F	Yes	Local Ordinance	2000	48.5

See captions under Table R301.2 (1) in the book for exceptions and conditions of approvals.

B. **Section R301.2.4 Floodplain construction**. Delete this section.

C. **Section R302.1 Exterior walls:** Delete exceptions 1 & 2.

D. **Section R302.2 Townhouses**: Revise to read as follows:

Revise to read as follows:

"**R302.2 Townhouses.** Each townhouse, as defined in this code, shall be constructed as a separate single-family dwelling unit and shall be separated by a minimum of an approved 2-hour UL rated assembly, which shall extend vertically from the foundation to the underside of the roof sheathing and horizontally the full length of the common wall. The number of single family dwelling units attached in this manner shall not exceed six (6)."

(Ord. 2016-M-9 § 1; Ord. 2012-M-10 § 1.)

E.1 **Section R302.3 Two family dwellings:** Revise to read as follows:

R302.3 Two family dwellings. Dwelling units in two family dwellings shall be constructed with a minimum of an approved 2-hour UL rated assembly between living units. Floor/ceiling assemblies shall extend to and be tight against the exterior wall, and wall assemblies shall extend from the foundation to the underside of the roof sheathing and shall extend the full length of the common wall."

(Ord. 2012-M-10 § 1.)

E.2 **Section R302.3 Two family dwellings**: Delete the exceptions.

F. **Section R302.7 Under stair protection**: Revise to read as follows:

"R302.7 Under stair protection. Enclosed accessible space under stairs shall have walls, under stair surfaces, and any soffits, protected on the enclosed side with 5/8-inch type X gypsum board."

G. **Section R303.3 Bathrooms, Exception**: Revise to read as follows:

"Exception: The glazed area shall not be required where artificial light and mechanical ventilation systems are provided. The minimum ventilation rates shall be 50 cfm for intermittent ventilation or 20 cfm for continuous ventilation. Ventilation air from the space shall be exhausted directly to the exterior of the structure by means of either the soffit area with an approved connection to the soffit or through the roof with an insulated (R-3) duct and approved roof fitting."

H. **Section R309.1.2 Opening protection:** Add a new section to read as follows:

"R309.1.2 Opening protection. Openings from a private garage directly into a room used for sleeping purposes shall not be permitted. Other openings between the garage and residence shall be equipped with solid wood doors not less than 1 3/8-inches in thickness, solid or honeycomb core steel doors not less than 1 3/8-inches thick. All such doors shall be equipped with self-closing hinges."

I. **Section R309.2.1 Separation required**: Add a new section to read as follows:

"R309.2.1 Separation required. The garage shall be separated from the residence and any attic area by not less than 5/8-inch type X gypsum board applied to the garage side and taped with a minimum one coat of approved joint tape and compound. Where the separation is a floor-ceiling assembly, the structure supporting the separation shall be protected by not less than 5/8-inch type X gypsum board with one coat of approved joint tape and compound or equivalent. The garage floor shall be poured a minimum of 4-inches below the top of the foundation to form a gas curb on any wall of the garage abutting the house."

J. **Section R310.1 Emergency escape and rescue required**: Revise to read as follows:

"R310.1 Emergency escape and rescue required. All basements and sleeping rooms shall have at least one openable emergency escape and/or rescue window or exterior door opening for emergency escape and/or rescue. Where windows are provided as a means of escape and/or rescue, they shall have a sill height of not more than 44-inches above the finished floor. Where a window (s) is provided as a means of egress and/or rescue from a basement or basement bedroom, they shall have a sill height not more than 36-inches above the finished floor. Where a door opening having a threshold below the adjacent ground elevation serves as an emergency escape and rescue opening and is provided with a bulkhead enclosure, the bulkhead enclosure shall comply with Section 310.3. The net clear opening dimension required by this section shall be obtained by the normal operation of the window or door opening from the inside. Escape and rescue window openings with a finish sill height below the adjacent ground elevation shall be provided with a window well in accordance with Section R310.2 of this Code."

K. **Section R310.2.1 Ladder and steps:** Revise to read as follows:

"**R310.2.1 Ladder and steps**. Window wells with a vertical depth greater than 36-inches below the adjacent ground level shall be equipped with a permanently affixed ladder or steps usable with the window in the full open position. Ladders and steps required by this section shall not be required with Section R314 and R315. Ladders or rungs shall have an inside width of at least 12-inches, shall project at least 3-inches from the wall, and shall be spaced not more than 18-inches on center vertically for the for the full height of the window well."

L. **Section R-311.2 Egress Door**: Revise to read as follows:

"R-311.2 Egress Door. Not less than two (2) exits with a minimum of one (1) exit conforming to this chapter shall be required from each dwelling unit. All such exits shall discharge at grade. The required exit doors shall not pass through a garage."

M. **Section R311.7.5 Landings for stairways**: Revise to read as follows:

"R311.7.5 Landings for stairways. A minimum of 3-foot by 3-foot landing shall be required on each side of an egress door. The floor or landing shall not be more than 1 ½- inches lower than the top of the threshold.

Exception:

1. At the top of a flight of all stairs, provided the door does not swing over the stairs."

N. **Section R313.1 Townhouse automatic fire sprinkler systems**: Revise to read as follows:

Exception No. 2: The requirement for the installation of automatic fire sprinkler systems in townhouses is deferred until December 31, 2017.

O. **Section R313.2 One- and two-family dwellings automatic fire sprinkler systems**:

Revise to read as follows:

Exception No. 2: The requirement for the installation of automatic fire sprinkler systems in one- and two-family dwellings is deferred until December 31, 2017.

P. **Section R311.7.7 Handrails**: Revise to read as follows:

"R311.7.7 Handrails. Handrails shall be provided on at least one side of each continuous run of treads or flight with more than three (3) or more risers."

Q. **Section R314.3 Locations**: Revise to read as follows:

"R314.3 Locations. Single and multiple-station smoke alarms shall be installed in the following locations:

a. In each sleeping room.

b. Outside of each separate sleeping room or area, within 15-feet of all bedrooms.

c. On each additional story of the dwelling, including basements and cellars, but not including crawl spaces and uninhabitable attics.

d. In dwellings or dwelling units with split-levels. For the purpose of this section each split-level shall be considered a story.

When more than one (1) smoke alarm is required to be installed within an individual dwelling unit, the alarm devices shall be interconnected in such a manner that the actuation of one (1) alarm will activate all of the alarms in the dwelling unit. The alarm shall be clearly audible in all bedrooms over background noise levels, with all intervening doors closed.

All smoke alarms shall be listed and installed in accordance with the provisions of this code and the household fire warning provisions of NFPA 72."

R. **Section R317.1.2 Ground contact**: Revise to read as follows:

"**R317.1.2 Ground contact.** Supports for permanent structures intended for human occupancy and which come in contact with the ground shall not be constructed of wood."

S. **Section R317.1.4 Wood columns**: Revise to read as follows:

"R317.1.4 Wood columns. Posts, poles, and columns supporting structures that are embedded in concrete, in direct contact with the earth or are embedded in concrete exposed to the weather are prohibited."

T. **Section R322 Flood resistant construction**: Delete this section.

Chapter 4 – Foundations:

A. **Section R401.1 Application**: Amend to read as follows:

"R401.1 Application. The provisions of this Chapter shall control the design and construction of the foundation and foundation spaces of all buildings and structures."

B. **Section R402.1, 402.1.1, 402.1.2**: Delete these sections.

C. **Section R403.1 General**: Delete the words "wood foundation" within the first sentence.

D. **Section R403.1.1 Minimum size**: Amend to read as follows:

"R403.1.1 Minimum size. Minimum sizes for concrete and masonry footings shall be as follows. Footing width shall be a minimum of twice the width of the wall it is supporting, or a minimum of 18-inches, whichever is greater. Unless soil conditions warrant a greater width, or so designed and certified by a license design professional, footing projections shall be equal to ¼ the width of the footing and the wall must fit center on the footing. Single story structures may be placed on 10-inch wide by 42-inch deep trench footing. Footing thickness shall be a minimum of 8-inches or the same depth as the wall thickness, whichever is greater, or as designed by a licensed design professional. See Figure R403.1 (1) for an illustration."

E. **Table R403.1 Minimum width of concrete or masonry footings (inches):**

Delete this table.

F. **Figure R403.1 (1) Concrete and masonry foundation details:**

(See attached Figure R403.1 (1)

G. **Figure R403.1 (2) Permanent Wood Foundation Basement Wall Section**: Delete this figure.

H. **Figure R403.1 (3) Permanent Wood Foundation Crawl Space section**: Delete this figure.

I. **Section R403.2 Footings for Wood Foundations:** Delete this section.

J. **Section R404.1.5.3 Pier and Curtain Wall Foundations**: Delete this section.

K. **Section R404.2 Wood Foundation Walls**: Delete this section.

L. **Sections R404.2.2 Stud Size and R404.2.3 Height of Backfill:** Delete these sections.

M. **Table R404.2.3 Plywood Grade and Thickness for Wood Foundation Construction**: Delete this table.

N. **Sections R404.2.4 Backfilling; R404.2.5 Drainage and Damp Proofing**; and R404.2.6 Fastening: Delete these sections.

O. **Sections R405.2 and R405.2.1 through R405.2.3 Wood Foundations**: Delete these sections.

P. **Sections R406.3 Damp Proofing of Wood Foundations**: R406.3.1, R406.3.2, R406.3.3, and **R406.3.4**: Delete these sections.

Q. **Section R407.1 Wood Column Protection**: Delete this section.

R. **Section R408.4.1 Crawl Space Floor**: Add a new section to read as follows:

"R408.4.1 Crawl Space Floor. A minimum of a 2-inch thick slush coat of poured concrete shall be installed over a minimum of 4-inch thick stone in the crawl space, with a minimum of a six (6) mil thick polyethylene film moisture barrier with all joints lapped a minimum of 6-inches."

Chapter 5 – Floors:

A. **Section R502.1.4.1 Fire Protection**. Prefabricated Wood I-Joists: Add a new section to read as follows:

"**R502.1.4.1 Fire Protection.** Prefabricated Wood I-Joists. When prefabricated wood I-Joists are used and there is usable space above and below a floor/ceiling assembly, the assembly shall be protected from fire impingement by one of the following:

1. The minimum application of one layer of 5/8-inch drywall and draft stopped per Section 502.12 of the 2006 International Residential Code.

2. The installation of an approved sprinkler system."

B. **Section R502.7.1 Bridging**: Amend to read as follows:

"R502.7.1 Bridging. Joists shall be supported laterally by solid blocking, or diagonal bridging (wood or metal) at intervals not exceeding 8-feet."

C. **Section R502.11.4 Truss Design Drawings**: Amend to read as follows:

"**R502.11.4 Truss Design Drawings.** Truss design drawings shall be submitted to and approved by the Building Official prior to a permit being issued for the structure. Truss design drawings shall be provided with the shipment of trusses to the job site. These truss design drawings shall include, at a minimum, the information specified below:

1. Slope or depth, span, and spacing;

2. Location of all joints;

3. Required bearing widths;

4. Design loads as applicable;

4.1 Top cord live load (including snow load)

4.2 Top cord dead load

4.3 Bottom cord live load

4.4 Bottom cord dead load

4.5 Concentrated loads and their points of application

4.6 Controlling wind and earthquake loads

5. Adjustments to lumber and joint connector design values for conditions of use;

6. Each reaction force and direction;

Joint connector type and description (e.g. size, thickness, or gauge) and the dimensioned location of each joint connector except where symmetrically located relative to the joint interface;

7. Lumber size, species and grade for each member;

8. Connection requirements for:

8.1 Truss-to-truss girder

8.2 Truss ply-to-ply

8.3 Field splices

9. Calculated deflection ratio and/or maximum description for live and total load;

10. Maximum axial compression forces in the truss members or enable the building designer to design the size, connections, and anchorage of the permanent continuous lateral bracing. Forces shall be shown on the truss drawing or on supplemental documents;

11. Required permanent truss member bracing location; and

12. Layout design."

D. **Section R504 Pressure Preserved Treated Wood Floors (on ground):** Delete this section.

E. **Section R506.1 General:** Amend to read as follows:

"**R506.1 General**. Concrete slab-on-ground floors shall be a minimum 4-inches thick with a minimum of 6x6 welded

wire fabric embedded in the mid cross section of the slab. The compressive strength of concrete shall be as set forth in Section R402.2. Fiber mesh can be used in place of welded wire."

F. **Section R506.2.1.1 Back-Fill in Garages (attached):** Add a new section to read as follows:

"**R506.2.1.1 Back-Fill under Concrete Garage Floors (attached).** The sub-base for poured concrete garage floors shall be undisturbed inorganic soil. All fill material shall be clean graded sand, crushed stones, or gravel. The use of any soils as fill material is prohibited. Compacted non-organic material can be used with dowelling #4 rebar into the foundation wall a minimum of 4- inches extending into the garage floor area a minimum of 3-feet, placed 24-inches on center around the three (3) walls forming the garage area, may be used. Any practice of soaking the soils within this area will be done in strict conformance with the locally applicable water conservation ordinance and shall be metered."

Chapter 6 – Wall Construction:

A. **Section R602.2 Grade**: Amend to read as follows:

"R602.2 Grade. Studs shall be a minimum No. 2, standard or stud grade lumber."

B. **Section R602.3.2 Top Plate**: Delete the exception.

C. **Table 602.10.2 Intermittent Bracing Methods**: Delete methods number four (4) SFB and five (5) GB.

Chapter 7 – Wall Covering:

No Changes.

Chapter 8 – Roof-Ceiling Construction:

A. **Section R802.10.1 Truss Design Drawings**: Amend to read as follows:

"R802.10.1 Truss Design Drawings. (See Section R502.11.4, as amended by this ordinance.)"

Chapter 9 – Roof Assemblies:

A. **Section R905.2.7.1 Ice Barrier**: Amend to read as follows:

"R905.2.7.1 Ice Barrier. On all new roof construction and roof tear offs an ice protection barrier that consists of a self-adhering polymer modified bitumen sheet shall be used in lieu of normal underlayment and extend from the eave's edge to a point at least 24-inches inside the exterior wall line of the structure."

Chapter 10 – Chimneys and Fireplaces:

A. **Section R1003.9 Termination**: Amend to read as follows:

"**R1003.9 Termination**. Chimneys shall extend at least 2-feet higher than any portion of a building within 10-feet, but shall not be less than 3-feet above the point where the chimney passes through the roof. All wood or solid fuel burning fireplaces and stoves shall be equipped with an approved spark arrestor."

Chapter 11 – Energy Efficiency:

No Changes.

Chapter 12 – Mechanical Administration:

No Changes.

Chapter 13 – General Mechanical System Requirements:

A. **Section M1307.3.2 Heating Units in Garages**: Add a new section to read as follows:

"M1307.3.2 Heating Units in Garages. Units designed to heat the habitable space of the home shall not be located in a garage."

Chapter 14 – Heating and Cooling Equipment:

No Changes.

Chapter 15 – Exhaust Systems:

No Changes.

Chapter 16 – Duct Systems:

A. **Section M1602.2.1 Return Air Vents**: Add a new section to read as follows:

"**M1602.2.1 Return Air Vents.** Return air vents connected to the heating and cooling system, shall be located in every habitable room of the home, except as prohibited in Section M1602.2 of the code."

Chapter 17 – Combustion Air:

No Changes.

Chapter 18 – Chimney and Vents:

No Changes.

Chapter 19 – Special Fuel – Burning Equipment:

No Changes.

Chapter 20 – Boilers/Water Heaters:

No Changes.

Chapter 21 – Hydronic Piping:

No Changes.

Chapter 22 – Special Piping and Storage Systems:

A. **Delete Chapter 22 in its entirety.**

Chapter 23 – Solar Systems:

No Changes.

Chapter 24 – Fuel Gas:

No Changes.

Chapters 25 through 32 – Plumbing:

A. "Delete Chapters 25 through 32. Substitute therefore: The most current State of Illinois Plumbing Code as adopted and/or amended by the City of St. Charles."

Chapters 33 through 42 – Electrical:

No Changes.

Chapter 43 – Referenced Standards:

No Changes.

Appendix Adoption:

Adopt the following Appendices

- Appendix A - "Sizing and Capacities of Gas Piping"
- Appendix B – "Sizing of Venting Systems – Appliances"
- Appendix C – "Exit terminals of Mechanical Venting Systems"
- Appendix D – "Procedure for Safety Inspection – Existing Appliances"
- Appendix F – "Radon Control Systems" - Delete Figure AF102.
- Appendix G – "Swimming Pools, Spas, and Hot Tubs"
- Appendix J – "Existing Buildings and Structures"
- Appendix K – "Sound Transmissions"
- Appendix M - "Home Day Care R-3 Occupancy"

Delete the following Appendices:

- Appendix E - “Manufacturing Housing used as Dwellings”
- Appendix H - “Patio Covers”
- Appendix I - “Private Sewage Disposal”
- Appendix L - “Permit Fee”
- Appendix N - “Venting Methods (Plumbing)”
- Appendix O - “Gray Water Recycling Systems”
- Appendix Q – “Cross Reference – ICC International Residential Code Electrical Provisions/National Electrical Code”

Exhibits: figure r403.1.png.jpg [8]
(2016-M-10 [9]: § 1 ; 2016-M-8 [2]; 2010-M-43 [10]: § 1; 2003-M-6 [11]: § 1; 1997-M-140 [12]: § 1; 1983-M-14 [13]: § 1 (part); 1978-M-19 [14]: § 1 (part); Prior code [15]: § 13.102.2.; 2015-M-71 [16]: § 1; 2016-M-59 [17]: § 1)

15.04.025 – International Swimming Pool & Spa Code 2015 **[18]**

The provisions of the 2015 International Swimming Pool & Spa Code issued by the International Code council Inc., 4501 West Flossmoor Road, Country Club Hills, IL 60478, not less than one (1) copy of which have been and are on file in the Office of the Clerk of the City of St. Charles, Illinois for more than thirty (30) days, together with the amendments listed herein, are hereby adopted.

Amendments to the 2015 International Swimming Pool & Spa Code:

1. Chapter 1 – Scope and Administration. The City has adopted a separate Administrative Code under Municipal Code Chapter 15.101.

a. Section 105.5.3 Expiration – delete in its entirety.

b. Section 105.5.4 Extensions – delete in its entirety.

c. Section 105.6.3 Fee Refunds – delete in its entirety.

d. Section 107.4 Violation Penalties – delete in its entirety.

e. Section 108 Means of Appeal = delete in its entirety.

Ordinances: Ordinance No. 2016-M-16 [19]

15.04.030 – International Mechanical Code 2015 – Regulations adopted and modified **[20]**

The provisions of the 2015 International Mechanical Code issued by the International Code Council Inc., 4051 West Flossmoor Road, Country Club Hills, Il 60478, not less than one (1) copy of which have been and are on file in the Office of the Clerk of the City of St. Charles, Illinois for more than thirty (30) days, together with the amendments listed herein, are here by adopted.

(2016-M-17 [21]: § 1; 2010-M-45 [22]: § 1; 2004-M-63 [23]: § 1; 1993-M-59 [24]: § 1)

15.04.035 – International Fuel Gas Code 2015– Regulations adopted and modified **[25]**

The provisions of the 2015 International Fuel Gas Code issued by the International Code Council Inc., 4051 West Flossmoor Road, Country Club Hills, IL 60478, not less than three (1) copies of which have been and are on file in the Office of the Clerk of the City of St. Charles, Illinois for more than thirty (30) days, together with the amendments listed herein, are hereby adopted.

Amendments to the 2015 International Fuel Gas Code:

1. Chapter 1 Scope and Administration. The City has adopted a separate Administrative Code under the Municipal Code Chapter 15.101.

a. Section 106.5.3 “Expiration” – Delete in its entirety

b. Section 106.6.3 “Fee Refunds” – Delete in its entirety

c. Section 108.4 “Violation Penalties” – Delete in its entirety

d. Section 109 “Means of Appeal” – Delete in its entirety

2. Chapter 4 Gas Piping Installations:

A. Section 403.5.4 “Corrugated Stainless Steel Tubing” – Delete in its entirety.

(2016-M-18 [26]: § 1; 2016-M-10 [9]: § 1; 2010-M-46 [27]: § 1; 2004-M-64 [28]: § 1)

15.04.040 – National Electrical Code 2014 – Regulations Adopted and Modified **[29]**

The provisions of the 2014 Edition of the National Electrical Code, NFPA 70, issued by the National Fire Protection Association, Inc., One Batterymarch Park, Quincy, Massachusetts, 02269 (hereinafter sometimes referred to as the "NEC") not less than three (1) copies of which have been and are on file in the Office of the Clerk of the City of St. Charles, Illinois, for more than thirty (30) days, together with the amendments listed herein, are hereby adopted.

(2016-M-19 [30]: § 1; 2010-M-47 [31]: § 1; 2003-M-79 [32]: § 1; 1997-M-140 [12]: § 2; 1993-M-59 [24]: § 1)

15.04.045 – National Electric Code 2014 NFPA 70 - Amendments **[33]**

1. **Article 110 Section 110.5 Conductors:** Revise by deleting and substituting the following:

Other than service conductors provided by the Utility or multiplexed aerial cables as allowed in Article 396 Section 396.2(4) that comply with Article 310, all conductors shall be copper unless otherwise specifically approved by the City of St. Charles Building and Code Enforcement or the City of St. Charles Electric Utility.

2. **Section 110.13 (A) Mounting:** Add a new paragraph to read as follows:

(A) Mounting. All electric panels mounted on concrete or masonry walls that are either exterior walls or below grade, shall have a minimum of 1/2 inch plywood installed behind the panel, or the panel shall be mounted to structural mounting channel that provides a minimum 1/2 inch airspace between the panel and the wall, for the purposes of support and to help prevent moisture entering the panel. Such mounting shall allow panel replacement if required.

3. **Section 210.70 Lighting Outlets Required:** Add a new paragraph to read as follows:

(D) Illumination of Mechanical Equipment. All occupancies shall have luminaries installed within four (4) feet of the front of all electric panels and within four (4) feet of mechanical heating equipment to enable servicing the equipment.

4. **Article 230 Services**

a. Section 230.2 Number of Services, (B) Special Occupancies: By special permission, which means written consent and approval by the City of St. Charles Municipal Electric Utility, additional services shall be permitted for either of the following:

(1) Multiple-occupancy buildings where there is no available space for service equipment accessible to all occupants.

(2) A single building or other structure sufficiently large to make two or more services necessary.

Add new paragraph to read as follows:

(3) Multiple-occupancy buildings will have either an external building main disconnect, a key operated shunt trip main disconnect, or a parallel key operated shunt trip main disconnects for all services supplied to the building. Parallel shunt trip key operated main disconnects must be provided and installed in a manner approved by the City of St. Charles Municipal Electric Utility

b. **Section 230.3 One Building or Other Structures Not to be Supplied Through Another:** Revise by deleting and substituting the following:

230.3 One Building, or Other Structure, or Tenant Space, Not to be Supplied Through Another, Service conductors, feeders, or branch circuits of one building, or other structure, or tenant space shall not pass through the interior of another building, or structure, or other space.

c. **Section 230.6 Conductors Considered Outside the Building:** Add new paragraph to read as follows:

(5) Installed in any "common area" (hallway, corridor or common space accessible to multiple premises) that meets the construction requirements of a one-hour fire rating. Conductors shall be installed in solid metal raceway pipe within "common areas" and shall have a label every five (5) feet identifying the conductors within the conduit.

d. **Section 230.44 Cable Trays: Delete entire section**

e. **Section 230.46 Spliced Conductors:** Revise by deleting and substituting the following:

230.46 Spliced conductors: Splices in service entrance conductors, other than those installed by the Electric Utility, are not allowed.

f. **Section 230.70 General (A) Location, (1) Readily Accessible Location:** Revise by deleting and substituting the following:

(1) Readily Accessible Location. Service disconnecting means shall be provided either outside the building or through a shunt trip main with remote control at the Fire Control Panel and shall have provisions to allow the service to be locked open. Each building/tenant space shall have a main disconnect incorporated within the main distribution panels inside the space in addition to any external main or building shunt trip main for multiple occupancy buildings.

g. **Section 230.70 General (A) Location: (3) Remote Control:** revise by deleting and substituting the following: Where a remote control device (s) is used to actuate the service disconnecting means, the service conductors installed inside a building without over current protection shall not exceed five (5) feet in length.

h. **Section 230. 79 Rating of Service Disconnecting Means (C) One Family**

Dwelling, (D) All Others: Revise by deleting and substituting the following:

C) One or Two Family Dwelling: All electric panel installations for new single family detached dwellings shall be a minimum of 200 -ampere rated. The main service disconnecting means (circuit breaker or fused switch) shall be 200 -ampere rated.

D) Multi -family and Single-family Attached Dwellings. All apartment or dwelling unit electric panel installations for new multi -family dwellings and new single family attached six (6) or less dwelling units shall be a minimum of 100 - ampere rated. The occupancy main service disconnecting means (circuit breaker or fused switch) for each apartment or dwelling unit shall be a minimum of 100 -ampere rated.

E) All Others. For all other installations, the service disconnecting means shall have a rating of not less than 60 -ampere, unless approved by the City of St. Charles Municipal Electric Utility.

5. **Article 250 Grounding and Bonding**

a. Section 250.24 Grounding Service -Supplied Alternating -Current Systems (A) System Grounding Connections (1) General: Revise by deleting and substituting the following: The grounding electrode conductor connection from each grounding.

b. electrode shall be made at a single point at the terminal or bus to which the grounded service conductor is connected at the service disconnecting means.

c. Section 250.53 Grounding Electrode System Installation (D) Metal Underground Water Pipe (2) Supplemental Electrode Required: revise by deleting and substituting: A metal underground water pipe shall be supplemented by an additional electrode of a type specified in 250.52 (A) (2- 8). If the additional is a rod type as specified in 250.52 (A) (5), then electrode must also have a supplemental additional electrode of a type specified in 250.53 (A) (2) unless as noted in 250.53 A) (2) Exception the first supplemental electrode has a resistance to earth of 25 ohms or less as evidenced by a fall -of -potential test witnessed by the City of St. Charles Municipal Electric Utility. Supplemental electrodes shall be connected with a grounding electrode conductor to the grounded service - entrance conductor at the service main disconnecting means.

d. Section 250.62 Grounding Electrode Conductor Material: revise by deleting and substituting the following: All grounding electrode conductors shall be copper, and the installation of the conductor shall protect against corrosion. Conductors of the wire type shall be solid or stranded, and insulated, or covered, or bare.

e. Section 250.64 Grounding Electrode Conductor Installation: Aluminum or Copper -Clad Aluminum Conductors. Delete entire Item (A)

C) Continuous: revise by deleting and substituting the following: Grounding electrode conductor(s) shall be installed in one continuous length without a splice or joint.

E) Raceways and Enclosures for Grounding Electrode Conductors. (1) General: revise by including additional language as follows: Ferrous metal raceways and enclosures for grounding electrode conductors shall be electrically continuous from the point of attachment to cabinets or equipment to the grounding electrode and shall be securely fastened to the ground clamp or fitting. Ferrous metal raceways and enclosures shall be bonded at each end of the raceway or enclosure to the grounding electrode or grounding electrode conductor. All grounding electrode conductor raceways that are exterior and exposed above grade shall be ferrous metal RMC or IMC conduit. Schedule 40 rigid PVC conduit is permitted for grounding electrode conductor raceways installed both above grade and underground in the interior of a building, as well as exterior underground if the entire raceway is -completely below grade. Schedule 40 rigid PVC grounding electrode conductor raceways are not required to be electrically continuous.

F) Installation to Electrode(s). revise by deleting and substituting the following: Unless granted a specific exemption by the City of St. Charles Municipal Electric Utility, all grounding electrode conductors and raceways must be installed separately and continuously from each grounding electrode to the service grounded conductor neutral) grounding/bonding termination point at the service main disconnect.

f. **Section 250.68 Grounding Electrode Conductor and Bonding Jumper Connection to Grounding Electrodes (C) Grounding Electrode Connections: r**evise by deleting (1) exception; and substituting the following for: (2) The metal structural frame of a building can only be used as a bonding conductor for a grounding electrode conductor

by specific approval of the City of St. Charles Municipal Electric Utility.

g. **Section 250.118 Types of Equipment Grounding Conductors**: Revise by deleting and substituting the following: **250.118 Types of Equipment Grounding Conductors**: The equipment grounding conductor must be a separate conductor run with the circuit conductors unless given exemption by the City of St. Charles Municipal Electric Utility or an approved certified testing agency.

6. **Article 300 General Requirements for Wiring Methods and Materials**

a. **Section 300.1 Scope (A) All Wiring Installations**: Add new paragraph to read as follows:

(1) With the exception of one and two family dwellings, all current carrying conductors exceeding 50 volts shall be installed in rigid metal conduit, intermediate metallic conduit, electrical metallic tubing, flexible metallic tubing, MC cable, or AC cable, with the exception that PVC conduit may be used with the approval of the City of St. Charles Building and Code Enforcement Department for corrosive or other special application areas.

b. **Section 300.5 (C) Underground Installations:** delete Exception No. 1 and delete Exception No. 2

c. **Section 300.5 Underground Installations, (D) Protection from Damage, (3) Service Conductors:** Revise by deleting and substituting the following: (3) Service Conductors. Single and two family dwelling underground service conductors shall be installed in minimum 3" Schedule 40 PVC. All other underground service conductors shall be installed in RMC, IMC, or Schedule 40 PVC conduit that is encased in concrete unless given exemption by the City of St. Charles Municipal Electric Utility.

d. **Table 300.5 Minimum Cover Requirements, 0 to 1000 Volts, Nominal, Burial in Millimeters (Inches):** Delete the third row table entries related to Under a Building.

e. **Table.300.5 Minimum Cover Requirements, 0 to 1000 volts, Nominal, Burial in Millimeters (Inches):** Revise by deleting and substituting the fourth row to read as follows: Table 300. 5 Minimum Cover Requirements, 0 to 1000 Volts, Nominal, Burial in Millimeters (Inches). Under minimum of 102 mm (4 inch) thick concrete interior or exterior slab with no vehicular traffic and the slab extending not less than 152 nun (6 inch) beyond the underground installation.

7. **Article 310 Conductors for General Wiring**

a. **I1 Installation: Section 310. 10 Uses Permitted (If) Conductors in Parallel (3) Separate Cables or Raceways:** revise by deleting and substituting: Where run in separate cables or raceways, the cables or raceways with conductors shall have the same number of conductors and shall have the same electrical characteristics. All conductors of a circuit shall have the same physical and electrical characteristics.

b. **Section 310. 106 Conductors (B) Conductor Material**. Revise by deleting and substituting the following: (B) Conductor Material. Other than service conductors provided by the Utility, or multiplexed aerial cables as allowed by Section 396. 2 (4) that comply with Article 310, all conductors shall be copper unless otherwise specifically approved by the City of St. Charles Building and Code Enforcement Department or the City of St. Charles Municipal Electric Utility.

8. **Article 314 Outlet, Device, Pull, and Junction Boxes; Conduit Bodies; Fittings; and Handhole Enclosures:**

a. Section 3143 Nonmetallic Boxes. Delete this section.

b. Section 314. 17 (C) Nonmetallic Boxes and Conduit Bodies. Delete this section.

c. Section 314.43 Nonmetallic Boxes. Delete this sectio

9. **Article 334 Nonmetallic -Sheathed Cable: Types NM, NMC, and NMS**

a. **Section 334.40 Boxes and Fittings (A) Boxes of Insulating Materials**. Revise by deleting and substituting the following: Nonmetallic outlet boxes are only permitted for use in corrosive applications as determined and approved by the City of St. Charles Building and Code Enforcement Department.

b. **Section 334.40 Boxes and Fittings (B) Devices of Insulating Materials**: Delete this section.

10. **Article 695 Fire Pumps: Section 695.3 Power Source(s) for Electric Motor –Driven Fire Pumps, (B) Multiple Sources (2) Individual Source and On -Site Standby Generator (a) Signage:** Add new paragraph to read as follows: Where a generator provides a secondary source for a fire pump, and the generator feeds other systems, clearly marked key operated shunt trip switches must be provided at the fire panel allowing Fire Department personnel the ability to open main breakers to panels not feeding the fire pump.

11. **Article 700 Emergency Systems Section 700.16 Emergency Illumination**: Add new paragraph to read as follows: (1) Additional spaces that require emergency lighting shall include all restrooms and mechanical rooms.

12. **Article 701 Legally Required Standby Systems:**

I General: Section 701.5 Transfer Equipment: Add new paragraph to read as follows:

(D) Transfer Equipment Requirements: Open type transfer switches are the only approved method for connection of standby systems. All transfer switch connections shall be " break before make" to insure the complete separation from the utility system and the generator supply. No parallel operation with the utility system shall be allowed. A minimum time delay of three (3) seconds and a maximum of ten (10) seconds after loss of utility power should be established before starting the generator. Utilization of Kirk Key systems or other mechanical means of isolating generating sources from the utility source are not allowed.

b. **III Sources of Power, Section (B) Generator Set:** Add new paragraph to read as follows:

6) Generator Noise Output. The maximum noise level allowable within ten (10') feet of transformer, switchgear, or other specified equipment as required and operated by the City of St. Charles Municipal Electric Utility (SCMEU) is 80dBA decibels). Sound enclosures or sound barrier walls or other sound mitigation may be required if the noise level near SCMEU equipment exceeds 80dBA. Analysis of the need for sound abatement equipment will be performed by the City of St. Charles Municipal Electric Utility personnel after the generator is installed and tested.

(2016-M-19 [30]: § 1; 2016-M-10 [9]: § 1; 2010-M-47 [31]: § 1; 2003-M-79 [32]: § 2)

15.04.050 – Illinois State Plumbing code 2014 - Adopted **[34]**

Illinois State Plumbing Code 2014 - Adopted

(2016-M-20 [35]: § 1; 2016-M-10 [9]: § 1; 2010-M-48 [36]: § 1; 2006-M-58 [37]: § 1-4; 2003-M-5 [38]: § 1; 1997-M-140 [12]: § 2; 1991-M-3 [39]: § 1; 1982-M-14 [40]: § 1; 1978-M-19 [14]: § 1; Prior code [15]: § 3.102.5)

15.04.055 – International Energy Conservation Code 2015 – Regulations adopted and modified **[41]**

The provisions of the 2015 International Energy Conservation Code issued by the International Code Council, Inc., 4051 West Flossmoor Road, Country Club Hills, IL 60478, not less than one (1) copy of which have been and are on file in the Office of the Clerk of the City of St. Charles, Illinois, for more than thirty (30) days, as hereby adopted.

(2016-M-21 [42]: § 1; 2016-M-10 [9]: § 1; 2013-M-20 [43]: § 1; 2012-M-44 [44]: § 2)

15.04.060 – International Existing Building Code 2015 **[45]**

The provisions of the 2015 International Existing Building Code issued by the international Code Council Inc., 4051 West Flossmoor Road, country Club Hills, IL 60478, not less than one (1) copy of which have been and are on file in the Office of the Clerk of the city of St. Charles, Illinois for more than thirty (30) days, together with the amendments listed herein, are hereby adopted.

Amendments to the 2015 International Existing Building Code:

1. Chapter 1 – Scope and Administration. The City has adopted a separate Administrative Code under the Municipal Code Chapter 15.101.

(2016-M-22 [46]: § 1; 2016-M-10 [9]: § 1; 1978-M-21 [47]: § 1; Prior code [15]: § 13.101.)

15.04.090 – Building Permit - Required **[48]**

Any owner or owner's authorized agent who intends to construct, enlarge, alter, repair, move or the demolition of a building or structure or to erect, install, enlarge, alter, repair, remove, convert or replace any electrical, gas, mechanical or plumbing system, the installation of which is regulated by the City's adopted code, or to cause any such work to be performed, shall first make application to the Building Official and obtain the required permit.

(2016-M-24 [49]: § 1; Prior code [15]: § 13.104)

15.04.105 – Flood damage prevention **[50]**

The requirements under Title 18, Flood Damage Prevention, shall be followed in connection with all proposed construction, substantial improvements, or other development within floodplain areas.

(2016-M-10 [9]: § 1; 1981-M-32 [51]: § 6)

15.04.120 – Time limit **[52]**

No building permit shall be valid for a period of more than one year from the date of issuance.

(Prior code [15]: § 13.108)